

Message

**From:** dunlap.david@epa.gov [dunlap.david@epa.gov]  
**Sent:** 4/26/2019 4:50:16 PM  
**To:** Fitzpatrick, Kacey [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b91d7852b66540ff9f823f4c736927a1-Fitzpatrick]  
**CC:** Orme-Zavaleta, Jennifer [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3c5a111dc377411595e5b24b5d96146b-Orme-Zavaleta, Jennifer]; Hubbard, Carolyn [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2a93ce3245494318b109e87f7d826284-Hubbard, Carolyn]; Mattas-Curry, Lahne [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d4369134369c4390991cf783c5c578aa-Mattas-Curry, Lahne]; D'Amico, Louis [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=78a91f83c4414910be286efe02004dbc-D'Amico, Louis J.]; Christian, Megan [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=64a0f5e0e9d94271b23cad28db653851-Lizotte, Me]; Fitzmorris, Amanda [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4051a5cf28144ee599b7cb3e9c2527bf-Fitzmorris,]  
**Subject:** Re: Interview Request: Using AI to model exposure

Agree with Jennifer. Please proceed.

David D. Dunlap  
Deputy Assistant Administrator  
EPA Office of Research & Development  
Office Personal Matters / Ex. 6

On Apr 26, 2019, at 12:14 PM, Fitzpatrick, Kacey <[Fitzpatrick.Kacey@epa.gov](mailto:Fitzpatrick.Kacey@epa.gov)> wrote:

## Deliberative Process / Ex. 5

**From:** Orme-Zavaleta, Jennifer  
**Sent:** Friday, April 26, 2019 11:39 AM  
**To:** Fitzpatrick, Kacey <[Fitzpatrick.Kacey@epa.gov](mailto:Fitzpatrick.Kacey@epa.gov)>  
**Cc:** Dunlap, David <[dunlap.david@epa.gov](mailto:dunlap.david@epa.gov)>; Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>; Mattas-Curry, Lahne <[Mattas-Curry.Lahne@epa.gov](mailto:Mattas-Curry.Lahne@epa.gov)>; D'Amico, Louis <[DAmico.Louis@epa.gov](mailto:DAmico.Louis@epa.gov)>; Christian, Megan <[Christian.Megan@epa.gov](mailto:Christian.Megan@epa.gov)>; Fitzmorris, Amanda <[fitzmorris.amanda@epa.gov](mailto:fitzmorris.amanda@epa.gov)>  
**Subject:** Re: Interview Request: Using AI to model exposure

## Deliberative Process / Ex. 5

Jennifer Orme-Zavaleta, PhD  
Principal Deputy Assistant Administrator for Science  
Office of Research and Development  
US EPA

Personal Matters / Ex. 6

On Apr 26, 2019, at 11:21 AM, Fitzpatrick, Kacey <[Fitzpatrick.Kacey@epa.gov](mailto:Fitzpatrick.Kacey@epa.gov)> wrote:

Yes, here they are:

Can you describe the shortcomings in exposure assessment that the model (e.g., the Brandon, et al. model) addresses--do these shortcomings ultimately reflect uncertainties in dose-response?

Is EPA building up capabilities in AI and does this paper reflect an early example of these efforts?

In what way is this model an example of an artificial intelligence system. Does the model have a capacity to learn from data? If so, can you describe how?

Future and current applications of AI at EPA...in any particular program? Where are the needs greatest?

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**From:** Dunlap, David

**Sent:** Friday, April 26, 2019 7:58 AM

**To:** Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>

**Cc:** Orme-Zavaleta, Jennifer <[Orme-Zavaleta.Jennifer@epa.gov](mailto:Orme-Zavaleta.Jennifer@epa.gov)>; Fitzpatrick, Kacey <[Fitzpatrick.Kacey@epa.gov](mailto:Fitzpatrick.Kacey@epa.gov)>; Mattas-Curry, Lahne <[Mattas-Curry.Lahne@epa.gov](mailto:Mattas-Curry.Lahne@epa.gov)>; D'Amico, Louis <[DAmico.Louis@epa.gov](mailto:DAmico.Louis@epa.gov)>; Christian, Megan <[Christian.Megan@epa.gov](mailto:Christian.Megan@epa.gov)>; Fitzmorris, Amanda <[fitzmorris.amanda@epa.gov](mailto:fitzmorris.amanda@epa.gov)>

**Subject:** Re: Interview Request: Using AI to model exposure

Did the reporter ever provide some questions?

David D. Dunlap  
Deputy Assistant Administrator  
EPA Office of Research & Development  
Office Personal Matters / Ex. 6

On Apr 26, 2019, at 7:24 AM, Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)> wrote:

OPA has approved- ok to proceed before you talk to him, David?

Carolyn Hubbard  
Communications Director  
EPA Office of Research and Development  
202-564-2189  
Personal Matters / Ex. 6

On Apr 25, 2019, at 4:59 PM, Dunlap, David <[dunlap.david@epa.gov](mailto:dunlap.david@epa.gov)> wrote:

Makes sense

David D. Dunlap  
Deputy Assistant Administrator  
EPA Office of Research & Development  
Office Personal Matters / Ex. 6

On Apr 25, 2019, at 2:51 PM, Orme-Zavaleta, Jennifer  
<[Orme-Zavaleta.Jennifer@epa.gov](mailto:Orme-Zavaleta.Jennifer@epa.gov)> wrote:

**Deliberative Process / Ex. 5**

Jennifer Orme-Zavaleta, PhD  
Principal Deputy Assistant  
Administrator for Science  
Office of Research and Development  
US Environmental Protection Agency

**Personal Matters / Ex. 6**

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**From:** Dunlap, David  
**Sent:** Thursday, April 25, 2019 1:14 PM  
**To:** Orme-Zavaleta, Jennifer <[Orme-Zavaleta.Jennifer@epa.gov](mailto:Orme-Zavaleta.Jennifer@epa.gov)>  
**Cc:** Fitzpatrick, Kacey  
<[Fitzpatrick.Kacey@epa.gov](mailto:Fitzpatrick.Kacey@epa.gov)>; Hubbard,  
Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>;  
Mattas-Curry, Lahne <[Mattas-Curry.Lahne@epa.gov](mailto:Mattas-Curry.Lahne@epa.gov)>; D'Amico, Louis  
<[DAmico.Louis@epa.gov](mailto:DAmico.Louis@epa.gov)>; Christian,  
Megan <[Christian.Megan@epa.gov](mailto:Christian.Megan@epa.gov)>;  
Fitzmorris, Amanda  
<[fitzmorris.amanda@epa.gov](mailto:fitzmorris.amanda@epa.gov)>  
**Subject:** Re: Interview Request: Using AI  
to model exposure

I agree. I am fine but would like to see  
questions in advance.

**Deliberative Process / Ex. 5**

David D. Dunlap  
Deputy Assistant Administrator  
EPA Office of Research & Development  
Office **Personal Matters / Ex. 6**

On Apr 25, 2019, at 12:52 PM, Orme-

Zavaleta, Jennifer <[Orme-Zavaleta.Jennifer@epa.gov](mailto:Orme-Zavaleta.Jennifer@epa.gov)> wrote:

I am fine, can we get questions in advance?

Jennifer Orme-Zavaleta,  
PhD  
Principal Deputy  
Assistant Administrator  
for Science  
Office of Research and  
Development  
US Environmental  
Protection Agency

**Personal Matters / Ex. 6**

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**From:** Fitzpatrick, Kacey  
**Sent:** Thursday, April 25, 2019 12:46 PM  
**To:** Orme-Zavaleta, Jennifer <[Orme-Zavaleta.Jennifer@epa.gov](mailto:Orme-Zavaleta.Jennifer@epa.gov)>; Dunlap, David <[dunlap.david@epa.gov](mailto:dunlap.david@epa.gov)>  
**Cc:** Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>; Mattas-Curry, Lahne <[Mattas-Curry.Lahne@epa.gov](mailto:Mattas-Curry.Lahne@epa.gov)>; D'Amico, Louis <[DAmico.Louis@epa.gov](mailto:DAmico.Louis@epa.gov)>; Christian, Megan <[Christian.Megan@epa.gov](mailto:Christian.Megan@epa.gov)>; Fitzmorris, Amanda <[fitzmorris.amanda@epa.gov](mailto:fitzmorris.amanda@epa.gov)>  
**Subject:** Interview  
Request: Using AI to model exposure

Hi all-

A reporter is working on an article for Environmental Health Perspectives and would like to interview two of our scientists (NERLS's

Paul Price and Namdi Brandon) about a paper they recently published about using artificial intelligence in environmental health research. I've attached a pdf of the paper. The paper is open access, so you can also find it here: <https://www.nature.com/articles/s41370-018-0052-y>

We've written a Science Matters story about this paper so the scientists have experience communicating about this research. Here is the article: <https://www.epa.gov/sciencematters/epa-researchers-use-ai-mimic-human-behaviors-could-affect-our-exposure-chemicals>

The reporter is hoping to talk tomorrow afternoon. Are you okay with this interview?

Thanks,  
Kacey